REMARKS

The above amendments and following remarks are submitted in response to the Official Action (i.e., Paper No. 15) of the Examiner mailed April 7, 2004. Having addressed all objections and grounds of rejection, claims 1-25 as amended, being all the pending claims including originally presented claims 1-20 and newly presented claims 21-25, are now deemed in condition for allowance. Entry of these amendments and reconsideration to that end is respectfully requested.

The Examiner has rejected claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,583,561, issued to Baker et al (hereinafter referred to as "Baker") in view of U.S. Patent No. 6,418,557, issued to Otani (hereinafter referred to as "Otani"). This rejection is respectfully traversed for the following reasons.

To make a *prima facie* case of obviousness, which is the burden of the Examiner under MPEP 2143, he must show 1) motivation to make the alleged combination; 2) reasonable likelihood of success of the alleged combination; and 3) all claimed elements within the alleged combination. The Examiner has failed to make these required showings.

Applicants have disclosed and claimed a video on demand system having a unique architecture. The specification summarizes at page 7, lines 4-12, stating:

The present invention overcomes many of the
disadvantages found within the prior art by providing a
video on demand system which separates the tasks of
supplying video to subscribers from the tasks
associated with managing the subscriber interface. The
key to this approach is to provide an architecture in
which the necessary functions are divided into two
separate portions. A first subsystem, called <u>a video
server, is specifically dedicated to retrieving and
transmitting the stream of video information.
Virtually no other functions are performed by the video
server. A second subsystem called the transaction
server handles virtually all other functions including
control interface with the subscribers, spooling of
digitized video data, subscriber accounting, e-mail,
facsimile, web access, etc</u>. (emphasis added)

In other words, in accordance with the disclosed and claimed

architecture, the video server(s) stream the previously spooled

video program from temporary memory to the user. The transaction

server performs all other functions.

A key advantages of this architecture, which separates the

very high throughput, realtime, video streaming functions

(performed by the video server subsystem) from all the remaining

non-realtime functions (performed by the transaction server), is

discussed at great length in the specification. Basically, by

dividing the functions vertically by type of function, it adds a

modularity to the system by separating growth of the subscriber

base (requiring additional video servers) from growth of

ancillary functionality for a given subscriber base (requiring

additional transaction server capability). This is readily

distinguishable from the prior art which only divides

horizontally, requiring the addition of capacity to only grow

linearly with increases in subscriber base.

This architecture is not taught by Baker, Otani, or the

alleged combination thereof. In rejecting claim 1, for example,

the Examiner specifically admits that "Baker does not disclose a

plurality of video servers coupled to the transaction server".

However, in alleging the combination of Baker with Otani (which

utilizes a different definition of video server from Applicants'

definition), the Examiner states:

> Otani discloses in Figures 1 and 2, a number of VOD
> servers 40-m which are coupled to request control unit
> 50 via cable 70 which processes request from user set
> top boxes and turns on power to more VOD servers when
> needed (column 5, lines 16-36, column 6, lines 16-67,
> column 7, line 39-column 8, line 9).

Yet, this does not respond to the claimed invention. Instead of

limiting its VOD servers 40-m to video streaming, Otani utilizes

them to processing the subscriber request, locating the requested

video data, and being the sole handlers of video data (see Fig.

1). Otani states at column 5, lines 25-33:

> Each of the VOD servers 40-1, 40-2,..., 40-m is
> typically connected to a video file device 80 which
> stores accumulated data as file data. In this case,
> upon receiving said data delivery request signal S11,
> said one of the VOD servers 40-1, 40-2,..., 40-m in
> operation finds said delivery data according to said
> request signal from among the file data stored in the
> video file device 80 and delivers the found delivery
> data to said one of STBs 10-2,...., 10-n which has
> transmitted said request signal.

Therefore, the alleged combination of Baker and Otani would

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permit horizontal growth, but not vertical growth, because it does not divide the video on demand functions into video streaming, and non-video streaming, as claimed by Applicants.

Specifically, with regard to claim 1, the Examiner states:

> Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Baker to include multiple VOD servers coupled to a transaction server as taught by Otani in order to reduce the server load, by powering on additional servers when needed, and to utilize middleware to enable the transaction server applications to interface with the VOD server applications in order to enable access to the user billing records.

Again, this would increase the capability of the system "horizontally" without providing the opportunity to increase "vertically" as is claimed. The claimed invention requires the transaction server to process the request, select the requested video program, spool the requested video program into a temporary memory, and assign a video processor to stream the spooled program. The alleged combination cannot work in this manner without the teaching of Applicants concerning system architecture. The rejection of claim 1 is respectfully traversed.

In rejecting claim 2, the Examiner takes Official Notice of the "middleware" limitations. However, there is no motivation for this structure in the alleged combination, because there is no such need. The rejection of claim 2 is respectfully traversed.

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In rejecting claim 3, the Examiner states:

> Regarding claim 3, Baker discloses that video server 12
> may be a mainframe system (column 8, lines 43-51) and
> discloses in Figure 3 that the mainframe (video server
> 12) may be coupled to a transaction server 54 (control
> server 54, column 10, lines 38-63), additionally the
> mainframe can act as a transaction server in of itself
> (column 7, lines 28-55).

This statement is irrelevant, as a matter of law, because it does not address the claim limitation.

The actual claim limitation requires "a mainframe computer platform hosting said transaction server responsively coupled to said one of said plurality of video servers and said subscriber receiver". That Baker suggests that the video server could be a mainframe is legally irrelevant. That Baker suggests that the mainframe could be coupled to a control server is legally irrelevant. Furthermore, that the transaction server and video server could be co-located is legally irrelevant. The alleged combination simply does not meet the claimed limitations. The rejection of claim 3 is respectfully traversed.

In rejecting claim 5, the Examiner cites Baker, column 7, lines 45-55. This citation says nothing of the claimed "spooling". For a description of the process of "spooling", the Examiner may wish to refer to Figs. 2-3 and pages 15-16 of Applicants' disclosure. The rejection of claim 5 is respectfully traversed.

In rejecting claim 6, the Examiner completely ignores

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limitations "c" and "e". Furthermore, he suggests that Baker contains limitation "d", but does not apply Baker or Otani to the actual claim language, because neither Baker nor Otani, nor the combination thereof contains the structure of claim limitation "d". The rejection of claim 6 is respectfully traversed.

In rejecting claim 7, the Examiner states:
Regarding claim 7, Baker discloses that video server 12 performs subscriber accounting and bills a subscriber for a VOD program request (column 7, lines 33-51). Again this finding is legally irrelevant. The claim requires that the "transaction server" be structured to provide these functions. The rejection of claim 7 is respectfully traversed.

In rejecting claim 8, the Examiner specifically denies that the alleged combination discloses the claimed elements. The claim requires "a transaction gateway operating in a commercial middleware environment". The Examiner apparently takes Official Notice of this limitation. Applicants respectfully traverse this taking of Official Notice under MPEP 2144 and respectfully requests that the Examiner cites a reference showing "a transaction gateway operating in a commercial middleware environment". The rejection of claim 8 is respectfully traversed.

In rejecting claim 9, the Examiner alleges Baker, column 7, lines 45-55 discloses "spooling". This finding is clearly

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erroneous. The rejection of claim 9 is respectfully traversed.

Claim 10 depends from claim 9 and is further limited by "wherein said transaction server further comprises a Unisys computer system". In making his rejection, the Examiner irrelevantly states:

> Regarding claim 10, Baker discloses that video server 12 may be a Unisys mainframe system (column 8, lines 43-51).

The claim further limits the "transaction server", not the "video server". The rejection of claim 10 is respectfully traversed.

Claim 11 is an independent claim having "means-plus-function" limitations and is to be examined in accordance with MPEP 2181 et seq. Furthermore, claim 11 has an element "d" which is a "spooling means" and an element "e" which is a "plurality of streaming means". Though the Examiner does not specifically address either of these two limitations. To the extent this is intentional, the rejection of claim 11 is incomplete. To the extent the Examiner implies that Baker discloses this structure, his findings are clearly erroneous. The rejection of claim 11 is respectfully traversed.

In rejecting claim 13, the Examiner alleges that Baker discloses the claimed limitation (i.e., "transaction gateway"). This finding is clearly erroneous. The citations of Baker say nothing of this limitation. The rejection of claim 13 is respectfully traversed.

In rejecting claim 14, the Examiner states:

> Regarding claim 14, Baker discloses that video server
> 12 processes subscriber transactions (column 7, lines
> 36-55).

Again, this statement is legally irrelevant. The claim requires that the "identifying means" processes subscriber transactions. This has nothing to do with having the "video server" processing subscriber transactions. The rejection of claim 14 is respectfully traversed.

In rejecting claim 15, the Examiner again finds that Baker shows a "video server" which is a Unisys mainframe. However, the claim requires that the "identifying means" be a Unisys mainframe. The rejection of claim 15 is respectfully traversed.

Claim 16 is an independent method claim having six steps. Because the Examiner address the disclosure of Baker, rather than the limitations of the claim, it is somewhat difficult to understand his rejection. However, it is clear that Baker does not perform the "spooling" step (i.e., element d) or the "assigning" step (i.e., element e). Thus, the rejection does not make a *prima facie* case of obviousness as specified by MPEP 2143. The rejection of claim 16, and all claims depending therefrom, is respectfully traversed.

In rejecting claim 17, the Examiner cites column 12, lines 7-17, of Baker. This citation specifically indicates that the video program does not stream the spooled video program as

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claimed but is streamed directly from the Video Library 10.
Column 12, lines 17-21, states:

> The implementation of these viewer requests controls
> the retrieval and subsequent transmission of the data
> being read from the Video Library 10 by the Disk I/O
> 64, IOP 68, and CA 70.

The rejection of claim 17 is respectfully traversed.

The rejection of claim 18 is respectfully traversed for similar reasons. It is clear from the citation that Baker streams directly from Video Library 10, rather than from previously spooled data.

The rejection of claim 19 is respectfully traversed for similar reasons. It is clear from the citation that Baker streams directly from Video Library 10, rather than from previously spooled data.

In rejecting claim 20, the Examiner finds that "Baker discloses that video server 12 performs subscriber accounting ...". Again, these functions are performed by the "video server" not by the claimed "transaction server". The rejection of claim 20 is respectfully traversed.

Newly presented claims 21-25, though different in scope from previously presented claims 1-20, are deemed allowable for similar reasons.

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Having thus responded to each objection and ground of rejection, Applicants respectfully request entry of this amendment and allowance of claims 1-25, being the only pending claims.
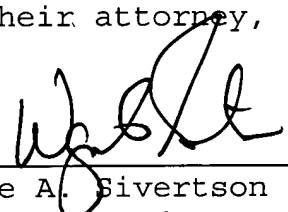
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Respectfully submitted,

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By their attorney,

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